

# Receiving Report

Date: 1/17/18

Batch No: M29 732

Supplier: BK

Dart P/O: 04807

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒  
 New Supplier Yes ☐ No ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☐ No ☒ N/A ☐  
 Shipment Complete: Yes ☐ No ☒ N/A ☐  
 QC18 Inspection ☐ N/A ☒  
 Work Order ☐ N/A ☒

## Discrepancies

| Part Number      | Description | Quantity Ordered | Quantity Rec'd | Quantity Short | Quantity Inspected | Quantity Rejected | Comment / NCR Number |
|------------------|-------------|------------------|----------------|----------------|--------------------|-------------------|----------------------|
| <u>AK 743-13</u> |             | <u>50</u>        | <u>0</u>       | <u>50</u>      | <u>0/100</u>       |                   |                      |
|                  |             |                  |                |                |                    |                   |                      |
|                  |             |                  |                |                |                    |                   |                      |

Initials of Receiver

QC12

Production/Admin: \_\_\_\_\_  
 Date \_\_\_\_\_  
 Received/Costing: \_\_\_\_\_  
 Initial \_\_\_\_\_

Location \_\_\_\_\_



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO24857

Purchase Order Date 7/3/2014

PO Print Date 7/3/2014

Page Number 1 of 3

**Order From :**

VU-BEA001

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

B/E AEROSPACE INC  
88289 EXPEDITE WAY  
CHICAGO, IL 33172  
USA

**FAXED**

**Contact Name**

**Vendor Phone** 305-925-2600

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

USD

**FOB**

FCA - (Free Carrier)

**Ship To Contact**

**Ship To Phone**

**Ship Via:** FedEx PI collect

**Ship Acct:**

M/29 732

| Line Nbr    | Reference<br>Vendor Part Number<br>Line Comments<br>Delivery Comments | Description/<br>Mfg ID | Req Date/<br>Taxable<br>Promise Date | CD | Req Qty/<br>Unit of<br>Measure | PO Unit Price | Extended<br>Price |
|-------------|---|------------------------|--------------------------------------|----|--------------------------------|---------------|-------------------|
| 1           | AN4-14A   | Bolt                   | 7/7/2014<br>Yes<br>7/7/2014          | FN | 200.00<br>Each                 | \$0.22        | \$44.00           |
| Line Total: |   |                        |                                      |    |                                |               | \$44.00           |
| 2           | AN4-15A   | Bolt                   | 7/7/2014<br>Yes<br>7/7/2014          | FN | 200.00<br>Each                 | \$0.25        | \$50.00           |
| Line Total: |   |                        |                                      |    |                                |               | \$50.00           |
| 3           | AN743-13  | Bracket                | 7/7/2014<br>Yes<br>7/7/2014          | FN | 50.00<br>Each                  | \$0.30        | \$15.00           |

**Note:**

7/3/2014



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO24857

Purchase Order Date 7/3/2014

PO Print Date 7/3/2014

Page Number 2 of 3

**Order From :**

B/E AEROSPACE INC  
88289 EXPEDITE WAY  
CHICAGO, IL 33172  
USA

VU-BEA001

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 305-925-2600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** FedEx PI collect

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

USD

**FOB**

FCA - (Free Carrier)

**Line Total:** \$15.00

|   |             |       |          |       |   |        |          |
|---|-------------|-------|----------|-------|---|--------|----------|
| 4 | NAS388-6-8P | SCREW | 7/7/2014 | 75.00 | ✓ | \$4.95 | \$371.25 |
|   |             |       | Yes      | Each  |   |        |          |
|   |             |       | 7/7/2014 |       |   |        |          |

272

**Line Total:** \$371.25

|   |         |                          |          |      |        |   |        |         |
|---|---------|--------------------------|----------|------|--------|---|--------|---------|
| 5 | 2600-LW | Camlock Retaining Washer | 7/7/2014 | FN   | 100.00 | ✓ | \$0.20 | \$20.00 |
|   |         |                          | Yes      | Each |        |   |        |         |
|   |         |                          | 7/7/2014 |      |        |   |        |         |

**Line Total:** \$20.00

|   |              |                |          |      |       |   |        |         |
|---|--------------|----------------|----------|------|-------|---|--------|---------|
| 7 | MS16625-4056 | Retaining Ring | 7/7/2014 |      | 20.00 | ✓ | \$1.20 | \$24.00 |
|   |              |                | Yes      | Each |       |   |        |         |
|   |              |                | 7/7/2014 |      |       |   |        |         |

317

**Line Total:** \$24.00

*Phy 7/8*

**Note:**

7/3/2014



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO24857**

Purchase Order Date 7/3/2014

PO Print Date 7/3/2014

Page Number 3 of 3

**Order From :**

B/E AEROSPACE INC  
88289 EXPEDITE WAY  
CHICAGO, IL 33172  
USA

VU-BEA001

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 305-925-2600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** FedEx PI collect

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms** Net 30

**Currency** USD

**FOB** FCA - (Free Carrier)

|   |          |                                |          |      |        |        |
|---|----------|--------------------------------|----------|------|--------|--------|
| 8 | 71401-45 | PROCUREMENT<br>QUALITY CLAUSES | 7/7/2014 | 1.00 | \$0.00 | \$0.00 |
|---|----------|--------------------------------|----------|------|--------|--------|

No

7/7/2014

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 PUBLIC LAW 101-592 FASTENER QUALITY ACT

A033 STATEMENT OF CONFORMITY/TEST RECORDS

FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

**Line Total:** \$0.00

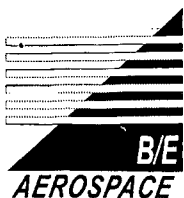
**PO Total:** \$524.25

CL

**Note:** Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Change Nbr: 2

Change Date: 7/3/2014



# B/E Aerospace, Inc.

## CONSUMABLES MANAGEMENT

Tel: +1.305.925.2600 • Fax: +1.305.507.7191 • www.beconsumables.com  
Remit to Address: 88289 Expedite Way, Chicago, IL 60695-0001  
Wire Instructions: B/E Aerospace Consumables Management • JPMorgan Chase Bank New York  
ABA: 021000021 • Account: 304639273 • SWIFT: CHASUS33 • CHIP UID: 0002

INVOICE NUMBER

HV6ZZ4

PAGE 1

SOLD TO:

002409  
DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

SHIP TO:

DART AEROSPACE LTD  
1270 ABERDEEN ST  
HAWKESBURY, ON  
CANADA K6A 1K7

### HISTORY REPRINT

| ORDER NO.  |                  | DATE  | SHIP VIA          | TERMS  |      | SHIPPING TERMS   |         |        |
|--|------------------|---|-------------------|--------|------|--|---------|--------|
| PO24857  |                  | 07/07/14  | FEDX INTL P1 COLL | NET 45 |      | FOB-CARSON   |         |        |
| ITEM NO.   | QUANTITY ORDERED | PART NUMBER AND DESCRIPTION   |                   | PRICE  | UNIT | BACK ORDER   | SHIPPED | AMOUNT |
| 3  | 50               | FED. TAX# 06-120-9796<br><br>AN743-13<br>BRACKET<br>TARIFF: 7616.10.9090<br>MFR: UMPCO<br>CTRL# : 2014B09715<br>LOT#: UMP96493<br>LOT QTY: 50<br>ECCN :9A991<br>Country Origin: YYYYY<br>These commodities, technology or software were<br>exported from the United States in accordance<br>with the Export Administration Regulations.<br>Diversion contrary to U.S. law is prohibited.<br><br>***BOLTS AND NUTS<br>***PARTS FOR CIVIL AIRCRAFT<br><br>FREIGHT ACCT# 15179324-0<br>TEL# 613-632-3336 |                   | 0.300  | EA   | 0  | 50      | 15.00  |
| emar 94SNZ6  |                  | SHIPPED ON 07/07/14   |                   |        |      | SUBTOTAL: 15.00<br>HANDLING: 0.00<br>DISC/ALL: 0.00<br>INCM FRT: 0.00<br>FREIGHT : 0.00<br><br>TOTAL : 15.00USD<br>U.S. CURRENCY |         |        |
| MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY B/E AEROSPACE |                  |   |                   |        |      |  |         |        |

ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE.

SHIPPED FROM: 1351 CHARLES WILLARD ST, CARSON, CA 90746

### DUPLICATE INVOICE

BY RECEIVING DELIVERY OF THE ITEMS COVERED BY THIS INVOICE, BUYER AGREES TO THE TERMS AND CONDITIONS OF SALE AT:  
www.beconsumables.com/cm/docs/BE\_CM\_Conditions\_of\_Sale.pdf

# UMPCO, INC.

Customer NO.  
BEA009

**MANUFACTURE OF CLAMPS, CLIPS & BRACKETS**  
7100 LAMPSON AVENUE P.O. BOX 5158 GARDEN GROVE, CA 92846-5158 714-897-3531  
WWW.UMPCO.COM

Sales Order NO.  
390646



SHIPPING DEST CODE MIAM

ASN

**SOLD TO**

B/E AEROSPACE

**SHIP TO**

B/E AEROSPACE CONSUMABLES  
MANAGEMENT  
9835 NW 14th ST  
MIAMI, FL 33172

CONSUMABLES MANAGEMENT  
P.O. BOX 025263  
MIAMI, FL 33102-5263

CLAIMS FOR ERRORS AND ALL DEDUCTIONS MUST BE MADE WITHIN 5 DAYS OF RECEIPT OF INVOICE 1 1/2% SVC. PER MO. CHARGED ON ALL PAST DUE AMOUNTS

ORDER DATE

SHIP VIA

F.O.B.

TERMS

SHIPPING DATE

10/01/13

FEDEX GROUND

RECIPIENT

1/2 % 10 NET 30

01/05/14

PURCHASE ORDER NUMBER

ORDER DATE

CONTACT

SALESPERSON

BILL OF LADING NUMBER

OSKF23

10/01/13

08

797830854579

ITEM ON ORDER QUAN.SHIPPED QUAN. BO

DESCRIPTION

1 12500 12500

AN743-13 P

02/04/14

N

1-7000  
1-5500

REV A

Lot#: UMP96493

N/A Qty: 12500 IR Numbers: 182199,182618

2 12500 0

AN743-13

08/09/14

N

REV A

RT

85% SHELF LIFE REQUIRED N/A

NOTE: UNDER 150 # SHIP FED X GROUND,

IF OVER 150 # SHIP FED EX NATIONAL LTL

ACCT: 018757

## PACKING SLIP

Page 1

Printed: 02/05/14 09:31:15

TOTAL CARTONS 2  
FEDEX GROUND 033101490

TOTAL WEIGHT

1-12X12X8 30#  
1-12X12X6 24#

PURCHASE ORDER NUMBER

CUSTOMER NO.

SALES ORDER NO.



A WRITTEN RETURN MATERIAL AUTHORIZATION FORM (RMA) MUST BE OBTAINED FROM UMPCO BEFORE RETURNING ANY MATERIALS FOR CREDIT OR REPLACEMENT.  
\*WE HEREBY CERTIFY THAT THESE GOODS WERE PRODUCED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF SECTION 6, 7 & 12 OF THE FAIR LABOR STANDARDS ACT, AS AMENDED, AND OF REGULATIONS AND ORDERS OF THE UNITED STATES DEPARTMENT OF LABOR ISSUED UNDER SECTION 14 THEREOF.\*  
UMPCO certifies that parts shipped on above documents conforms in all respects to applicable specifications and/or standards. Complete physical and chemical test reports as required are on file and available for review. Processing product testing and inspection control of raw material shall be in conformance with all applicable specifications, drawings and/or standards. Products are produced in a mercury free environment. \*When applicable materials are compliant to DFARS 252.225-7009.\*

UMPCO, INC. 7100 Lampson Ave.  
Garden Grove, CA 92841

Authorized Signature Final Inspector

DELIVERY RECEIPT NO. 390646



# B/E Aerospace, Inc.

Page: 1 of 1

## CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO24857**

| LN# | QUANTITY | U/M | PART-NUMBER | CUST REF# | LOT-NUMBER | MANUFACTURER       | CCODE | MFR DATE | EXP DATE |
|-----|----------|-----|-------------|-----------|------------|--------------------|-------|----------|----------|
| 4   | 75       | EA  | NAS388-6-8P |           | M8874      | PILGRIM SCREW (AZ) | 1GP79 |          |          |

  
Jason Lewis  
Vice President of Quality

07/07/14

# PILGRIM

## Screw Corporation

### PACKING LIST

ARIZONA - 480-917-2500

SHIPPED FROM  
2875 WEST FRYE RD  
CHANDLER, AZ 85224

RHODE ISLAND - 401-274-4090

6/2/2011



PAC124087

BE  
BILL TO: B/E AEROSPACE  
CONSUMABLES MANAGEMENT  
MIAMI FL 33102-5263  
P.O. BOX 025263

SHIP TO: B/E AEROSPACE  
CONSUMABLES MANAGEMENT  
9835 NW 14TH STREET  
MIAMI, FL 33172

| OUR ORDER #    | TERMS              | FREIGHT SHIP VIA | SHIPPING DATE |
|----------------|--------------------|------------------|---------------|
| ORD104537      | N-30*DNI*033101490 | C FedEx Ground   | 6/2/2011      |
| CUSTOMER PO #: | <br>0ZJ868         |                  |               |

| QTY     | U/M | PART #   | DRAWING #            |
|---------|-----|--|----------------------|
| <br>250 | EA  | <br>NAS388-6-8P<br>6-32 X 1/2 PH OVL STL/NI<br>OR SOONER | NAS388 Revision: NEW |

LOT#:

A26727 QTY: 39.00

M8874 QTY: 211.00 pc#253

1 CTNS, TOTAL WT. 1.00 LBS WITH 0 ON BACKORDER

MFR C OF C

CHEM AND PHYS

MATERIAL AND PROCESS CERTS

QC: A, A.3, B, C, E, H, P, U, V

LATEST REV

SHIPPING INSTRUCTIONS:

**\*\*NO OVERSHIPMENTS\*\***

IF UNDER 150 LBS SHIP FEDEX GROUND ACCT# 0331-0149-0 MARK:

COLLECT

IF OVER 150 LBS, SHIP WATKINS MOTOR LINE ACCT #081757.

**\*\*\*DO NOT INSURE OR DECLARE A VALUE FOR THIS SHIPMENT\*\*\***

### CERTIFICATE OF COMPLIANCE

We hereby certify that all items delivered on this invoice comply with all applicable drawing, specification, and purchase order requirements. Evidence of such is on file for review for a minimum of 10 years. All products manufactured by Pilgrim Screw are of domestic origin and have not come in contact with mercury while in our possession. Also all special processes were performed by approved sources at the time of manufacture. Shortage claims must be made within (5) days after receipt of the goods. Quality claims must be made within (30) days after receipt of the goods. Returns will not be accepted without a 'Return Material Authorization' number. All goods returned must have the freight prepaid.

MADE IN THE USA



# PILGRIM

Screw Corporation

## PACKING LIST

ARIZONA - 480-917-2500

SHIPPED FROM  
2875 WEST FRYE RD  
CHANDLER, AZ 85224

RHODE ISLAND - 401-274-4090

6/2/2011



PAC124087

BE  
BILL TO: B/E AEROSPACE  
CONSUMABLES MANAGEMENT  
MIAMI FL 33102-5263  
P.O. BOX 025263

SHIP TO: B/E AEROSPACE  
CONSUMABLES MANAGEMENT  
9835 NW 14TH STREET  
MIAMI, FL 33172

| OUR ORDER #    | TERMS              | FREIGHT SHIP VIA | SHIPPING DATE |
|----------------|--------------------|------------------|---------------|
| ORD104537      | N-30*DNI*033101490 | C FedEx Ground   | 6/2/2011      |
| CUSTOMER PO #: | <br>0ZJ868         |                  |               |

| QTY | U/M | PART # | DRAWING # |
|-----|-----|--------|-----------|
|-----|-----|--------|-----------|

Schedule B#: 731815  
ECCN #: 9A991d "NLR"

SHIPPING INSTRUCTIONS: LABEL ON OUTSIDE OF BOX

HONEYWELL SOURCE ACCEPTED:

STAMP IMPRESSION

DATE:

6/2/2011

\*\*\*\*BOXES MUST NOT EXCEED 40 LBS EACH\*\*\*\*

## CERTIFICATE OF COMPLIANCE

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MADE IN THE USA



# PILGRIM SCREW CORPORATION

120 Sprague Street, Providence, RI 02907



NEW METHOD (NI)  
43 HAMMOND STREET  
WORCESTER MA 01610

Item # 2504 Ref: PO# PL1412 Date 04/14/99  
Lot/Job # Part # Net Weight Quantity  
M8874 NAS388-06-08P 30 14340

[ ] Cadmium, QQ-P-416F Type , Class  
[ ] Cadmium, AMS2400S  
[ X ] Nickel, QQ-N-290A, Class 1, Grade G  
[ ] Nickel, Best Commercial, thickness .0003 max. as measured on hd  
[ ] Zinc, ASTM B633-85, Type , Fe/Zn  
[ ] CHROME, QQ-C-320B(4) CLASS 2 TYPE II

Material: 8740[ ] 8630[ ] 4037[ ] 1018[X] [ ]

Heat Treated? Yes[ ] No[X] Hardness: 26 HRC max

Special Instructions

QA Initials M.E.R.

The certifying company shall maintain a record of each processing bath showing all additional chemicals or treatment solutions to the unit, results of all analysis performed, and quantity of parts plated for a period of not less than 1 year. Sampling for acceptance tests is 32 pieces for thickness and 4 pieces for adhesion tests without non-compliance (zero-based acceptance plan). Workmanship involves a 100% visual inspection for the appearance of a smooth uniform finish. Corrosion tests are applicable to specification.

## Thickness Test Results

Accept. [✓] Reject [ ] Minimum: Spec. .0002 Read .00020 Average .00024

## Adhesion Test Results

Accept. [✓] Reject [ ] Inspected by Bill Wolfe

## Certification

To: QA Manager, Pilgrim Screw Corporation.

This lot has been processed, sampled, tested, and inspected in accordance with the contract and specification requirements listed above, and the plating and conversion coating complies with those contract and specification requirements. Process control data is on file and is available upon request.

Signed: Bill Wolfe

Title Foreman

Date 4-16-99



# B/E Aerospace, Inc.

Page: 1 of 1

## CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO24857**

| LNE# | QUANTITY | U/M | PART-NUMBER | CUST REF# | LOT-NUMBER | MANUFACTURER               | CCODE | MFR DATE | EXP DATE |
|------|----------|-----|-------------|-----------|------------|----------------------------|-------|----------|----------|
| 5    | 100      | EA  | 2600-LW     |           | 1643295    | ALCOA VOISHAN 3000 W 5M902 |       |          |          |

  
Jason Lewis  
Vice President of Quality

07/07/14

# Alcoa Fastening Systems



Shipper ID: 850695

Page: 1

Sold To: 5574  
B/E AEROSPACE, INC.  
ATTN: ACCOUNTS PAYABLE  
P.O. BOX 025263  
MIAMI, FL 33102-5263  
USA

Ship To: 55740014  
B/E AEROSPACE CONSUMABLES  
9835 NW 14TH ST  
MIAMI, FL 33172  
USA

Shipped From:  
AFS -TORRANCE  
AEROSPACE PRODUCTS  
TORRANCE OPERATIONS  
3000 WEST LOMITA BLVD.  
TORRANCE, CA 90505  
TEL: 310-530-2220  
USA

Ship Date: 07/30/13  
Print Date: 07/30/13  
Time: 11:18:44

Ship Via: FED EX GRD  
INCO Terms: FCA TORRANCE

Container/Weight:  
Carrier Shipment Ref: 850695  
Bill Lading #:

SHIP VIA :FED EX G

BUYER: OLGA

PHONE:

MATERIAL COMPLIES WITH DFARS 252.225-7009 PREFERENCE FOR DOMESTIC SPECIALTY  
METALS" WITH ITS ALTERNATE 1.

\*\*\*SHIP VIA FED EX GRD COLLECT ACCT# 0331-0014940 EX 100 LBS OR MORE SHIP FED

EX FREIGHT ECONOMY COLLECT ACCT# 0187

DO NOT SHIP BY ANY OTHER WITHOUT PROPER WRITTEN AUTHORIZATION.

ALLOWABLE SHIPPING TOLERANCE = +0%-0%.

\*\* BAR CODE PER QAP 33 CLAUSE P REQUIRED \*\*

\*\* QAP 33.0 REV F CLAUSES: A,A.1,B,C,E,H,P,U,V. CLAUSE A.3 GENERAL TERMS  
APPLIES.

Sales Order: F430267 Order Date: 04/10/12 Purchase Order: 0HEE59

Remarks: VITA

| Ln | Item Number | Description | Rev | Qty Shipped | Qty B/O UM |
|----|-------------|-------------|-----|-------------|------------|
|----|-------------|-------------|-----|-------------|------------|

|   |          |                      |  |         |        |
|---|----------|----------------------|--|---------|--------|
| 4 | BACW10X4 | LOCKWASHER (2600-LW) |  | 80502.0 | 0.0 EA |
|---|----------|----------------------|--|---------|--------|

TSO C148

Cust Line #: 3

Customer Item: BACW10X4

Required Date: 08/01/13 Promised Date: 08/10/13

C OF C

DUAL CERT TO HS4432-2 & 3D0050-3 \*\*\*

Loc/Lot: S5I01B 1643295 80,502.00 COO: US

HTS CODE: 7318220000

SCHEDULE-B NUMBER: 7318220000 ECCN: 9A991

The export classification appears above. You are responsible for all

## CERTIFICATE OF CONFORMANCE

This is to certify that all items noted below were produced in conformance with the contract, drawing specifications, and other applicable documents. All required process certifications, chemicals and physical test reports are on file subject to examination. This document must not be reproduced except in full and relates only to the items tested.

*[Signature]*  
Director of Quality Assurance  
Torrance Operations

ALCOA GLOBAL FASTENERS, INC.

ALL CLAIMS REGARDING THIS ORDER MUST BE REPORTED TO SELLER PROMPTLY. CLAIMS FOR CREDIT OR REPLACEMENT OF PARTS MAY BE LIMITED TO THOSE PARTS FOR WHICH TRACEABILITY HAS BEEN MAINTAINED BY THE BUYER. ANY CLAIM BASED ON AN ALLEGED DISCREPANCY (IN AMOUNT, QUANTITY, ETC.), BETWEEN THE GOODS ACTUALLY SHIPPED AND / OR DELIVERED UNDER THESE DOCUMENTS AND THE DESCRIPTION THEREOF IN THESE DOCUMENTS, MUST BE MADE IN WRITING TO SELLER NO LATER THAN NINETY (90) DAYS AFTER THE SHIPPING DATE APPEARING HEREON.

CUSTOMER'S COPY



Page: 2

Ship To: 55740014  
B/E AEROSPACE CONSUMABLES  
9835 NW 14TH ST  
MIAMI, FL 33172  
USA

Ship Date: 07/30/13  
Print Date: 07/30/13  
Time: 11:18:44

Container/Weight:  
Carrier Shipment Ref: 850695  
Bill Lading #:

related export license requirements.

\*\*\*\*\* Total Qty. Shipped: 80,502 \*\*\*\*\*

# CERTIFICATION

**CERTIFICATE OF CONFORMANCE**  
This is to certify that all items noted below were produced in conformance with the contract, drawing specifications, and other applicable documents. All required process certifications, chemicals and physical test reports are on file subject to examination. This document must not be reproduced except in full and relates only to the items tested.

**Director of Quality Assurance  
Torrance Operations**

**ALCOA GLOBAL FASTENERS, INC.**

ALCOA GLOBAL FASTENERS, INC.

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**CUSTOMER'S COPY**

**Alcoa  
Fastening  
Systems**



3000 W Lomita Blvd  
Torrance, California 90505 USA  
Tel: 1 310 530 2220  
Fax: 1 310 784 4320

# Processing Certification

# 382650

*Date*

**07/29/2013**

*Lot Number*

**1638790**

*Lot Quantity*

**100904**

*Part Number*

**2600-LW**

*Type of Process*

**CADMIUM PLATE  
TYPE II, CLASS 2**

*I.B.M. Number*

**422997**

*Specification*

**AMS-QQ-P-416C**

*Material Type*

**C1075**

**Mony Barkol**

*Director of Quality Assurance*



**7-29-13**

*Lab Tech Stamp / Date*



*Lock Washer Assy Lot. 1643395*

# CERTIFICATE OF CONFORMITY



# B/E Aerospace, Inc.

Page: 1 of 1

## CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITE: MIAMMCR  
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: P024857**

| LNE# | QUANTITY | U/M | PART-NUMBER | CUST REF# | LOT-NUMBER | MANUFACTURER  | CCODE | MFR DATE | EXP DATE |
|------|----------|-----|-------------|-----------|------------|---------------|-------|----------|----------|
| 1    | 200      | EA  | AN4-14A     |           | 68538      | MAC FASTENERS | ORFT4 |          |          |

  
Jason Lewis  
Vice President of Quality

07/07/14



**MAC FASTENERS, INC.**  
**1110 ENTERPRISE**  
**OTTAWA, KANSAS 66067**

**CERTIFICATE OF CONFORMANCE  
AND  
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: B/E AEROSPACE

PO: 0PZH84

PART NUMBER: AN4-14A

REV: 2

LOT NUMBER: 68538

MANUFACTURED QUANTITY: 110,000

MILL HEAT NUMBER: 8193290

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

**MERCURY FREE CERTIFICATION**

MacFasteners Inc. certifies that the parts referenced in the above lot number  
do not contain Mercury or Mercury compounds, and were  
manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured  
by MAC FASTENERS, INC. within the United States, and were processed in accordance with all  
applicable drawings and specifications.

Objective evidence of compliance is on file, subject to examination upon request.

DATE: 01/22/14

  
QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company- SAI GLOBAL - 0058029

MAC FASTENERS, INC.  
1110 ENTERPRISE  
OTTAWA, KANSAS 66067

**CERTIFICATE OF CONFORMANCE  
AND  
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: B/E AEROSPACE

PO: 0PZH84

PART NUMBER: AN4-14A ✓

REV: 2

LOT NUMBER: 68538 ✓

MANUFACTURED QUANTITY: 110,000

MILL HEAT NUMBER: 8193290 ✓

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

SIKORSKY  
3534  
DOR  
MAY 01 2014

571144

**MERCURY FREE CERTIFICATION**

MacFasteners Inc. certifies that the parts referenced in the above lot number do not contain Mercury or Mercury compounds, and were manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC FASTENERS, INC. within the United States, and were processed in accordance with all applicable drawings and specifications.

Objective evidence of compliance is on file, subject to examination upon request.

DATE: 01/22/14

  
QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company- SAI GLOBAL - 0058029

**MAC FASTENERS, INC.**  
**1110 EAST ENTERPRISE**  
**OTTAWA, KS 66067**

## CHEMICAL & PHYSICAL TEST REPORT

|                           |                     |                         |                              |
|---------------------------|---------------------|-------------------------|------------------------------|
| CUSTOMER<br>B/E AEROSPACE | PO NUMBER<br>0PZH84 | MFG QUANTITY<br>110,000 | DATE<br>01/22/14             |
| PART NUMBER<br>AN4-14A    | REV<br>2            | LOT NO<br>68538         | PROCUREMENT SPEC<br>NASM6812 |

| MATERIAL  |     |       |      | MATERIAL SPECIFICATION |     |     |     | MILL HEAT NUMBER |      |   | SUPPLIER  |       |    |
|-----------|-----|-------|------|------------------------|-----|-----|-----|------------------|------|---|-----------|-------|----|
| TYPE 8740 |     |       |      | MIL-S-6049/AMS6322     |     |     |     | 8193290          |      |   | JOHNSTOWN |       |    |
| C         | Si  | Mn    | P    | S                      | Cu  | Ni  | Cr  | Mo               | V    | B | Fe        | Al    | Ti |
| .40       | .24 | .77   | .010 | .010                   | .10 | .52 | .58 | .26              | .002 |   |           | .023  |    |
|           | Co  | N     | Bi   | Pb                     | Mg  | Zn  |     | Nb               | Sn   |   |           | Other |    |
|           |     | .0060 |      |                        |     |     |     |                  | .005 |   |           |       |    |

### MECHANICAL TEST RESULTS - TESTING PER NASM1312

| ULTIMATE TENSILE STRENGTH<br>POUNDS |       |
|-------------------------------------|-------|
| 5,770                               |       |
| 5,710                               |       |
| 5,720                               |       |
| 5,730                               |       |
| 5,750                               |       |
| MIN. REQ.                           | 4,080 |

| DOUBLE SHEAR STRENGTH<br>POUNDS / PSI |       |
|---------------------------------------|-------|
| 8,180                                 |       |
| 8,130                                 |       |
| 8,140                                 |       |
| 8,160                                 |       |
| 8,190                                 |       |
| MIN. REQ.                             | 7,360 |

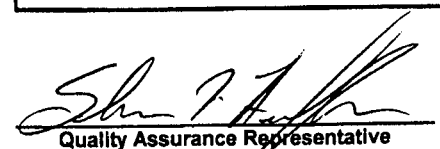
| HARDNESS           |             |
|--------------------|-------------|
| ROCKWELL "C" SCALE |             |
| REQ.               | 26 - 32 HRC |
| SAMPLE SIZE        | 5           |
| ACTUAL RESULTS     |             |
| 28 - 30 HRC        |             |

| METALLURGICAL EXAMINATION                       |                                     |   |                                     |
|---|-------------------------------------|---|-------------------------------------|
| Discontinuities                                 | <input checked="" type="checkbox"/> | Carb/Decarb                                   | <input checked="" type="checkbox"/> |
| Grain Flow                                      | <input checked="" type="checkbox"/> | Microstructure                                | <input checked="" type="checkbox"/> |
| Grain Size                                      | <input checked="" type="checkbox"/> | Appearance                                    | <input checked="" type="checkbox"/> |
| Thread Inspection<br>FED-STD-H28/20 - ASME B1.3 | System <input type="checkbox"/> 21  | System <input checked="" type="checkbox"/> 22 | System <input type="checkbox"/> 23  |

| NDT/ ADDITIONAL TESTS                            |                                     |
|--|-------------------------------------|
| Magnetic Particle Inspection per<br>ASTM E1444   | <input checked="" type="checkbox"/> |
| Liquid Penetrant Inspection per<br>ASTM E1417    | <input type="checkbox"/>            |
| Recess Torque Test                               | <input type="checkbox"/>            |
| Head Marking                                     | <input checked="" type="checkbox"/> |
| Magnetic Permeability<br>ASTM A342 less than 2.0 | <input type="checkbox"/>            |

### TEST CERTIFICATION

WE CERTIFY THAT THE PART NUMBER, LOT NUMBER, AND SAMPLES REFERENCED ABOVE HAVE BEEN TESTED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION FOR THE TESTS REPORTED HEREIN. THIS CERTIFICATION SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE APPROVAL OF MAC FASTENERS, INC.

  
 Quality Assurance Representative

**AS9100C REGISTERED**  
**SAI GLOBAL - 0058029**

MAC FASTENERS, INC.  
1110 ENTERPRISE  
OTTAWA, KANSAS 66067

## HEAT TREAT CERTIFICATION

CUSTOMER: B/E AEROSPACE

DATE: 01/22/14

PO NUMBER: 0PZH84

MANUFACTURED QUANTITY: 110,000

PROCESSOR:

PAULO PRODUCTS KCMO - NADCAP ID 4679

LOT NUMBER: 68538

MATERIAL: TYPE 8740

PART NUMBER: AN4-14A

REVISION: 2

REQUIRED HARDNESS: 26 - 32 HRC

SAMPLE SIZE: 5

HARDNESS: 28 - 30 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001

Notes:

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.

  
QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company - SAI GLOBAL - 0058029



# Johnstown Wire Technologies

124 Laurel Ave,  
Johnstown, PA 15906

Phone: 814-532-5680  
Fax: 814-532-5684

WORK ORDER  
800310

## TEST REPORT

LOT NUMBER  
K-8193290  
SALES ORDER / RLS  
002318 / 1

SOLD TO

Mac Fasteners, Inc.  
C/O TD Logistics Inc.  
14505 W 100th Street  
Lenexa, KS 66215  
USA



|  |                              |                          |              |                       |                             |           |           |           |           |           |          |          |
|--|------------------------------|--------------------------|--------------|-----------------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|----------|----------|
| CUSTOMER P.O.<br>50516   | CUSTOMER PART<br>8740- .2465 | QUANTITY<br>39,644 LBS   | COILS<br>20  | LADING NO<br>00119854 | SHIPMENT DATE<br>09/20/2013 |           |           |           |           |           |          |          |
| <b>SPECIFICATION MacFast-87246</b><br><b>AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS TS 95000 PSI Max Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spherodize Annealed In Process Heavy Phos &amp; Light Lube Ctd</b><br><b>Size: .2465 +.0005 -.0005</b> |                              |                          |              |                       |                             |           |           |           |           |           |          |          |
| <b>CERTIFICATION REQUIREMENTS</b>  |                              |                          |              |                       |                             |           |           |           |           |           |          |          |
| <b>Chemical</b>  |                              |                          |              |                       |                             |           |           |           |           |           |          |          |
| C<br>.40   | Mn<br>.77                    | P<br>.010                | S<br>.010    | Si<br>.24             | Al<br>.023                  | Ni<br>.52 | Cr<br>.58 | Mo<br>.26 | Cu<br>.10 | V<br>.002 |          |          |
| Cb<br>.000   | Ti<br>????????               | N<br>.0060               | Sn<br>.005   |                       |                             |           |           |           |           |           |          |          |
| <b>Physical</b>  |                              |                          |              |                       |                             |           |           |           |           |           |          |          |
| AMS 2301<br>0000   | J1<br>56                     | J10<br>40                | J11<br>38    | J12<br>36             | J2<br>55                    | J3<br>55  | J5<br>53  | J4<br>54  | J6<br>52  | J7<br>50  | J8<br>46 | J9<br>43 |
| MacroClean E-381<br>111  |                              |                          |              |                       |                             |           |           |           |           |           |          |          |
| <b>Mechanical</b>  |                              |                          |              |                       |                             |           |           |           |           |           |          |          |
| <b>TEST</b>  | <b>UNITS</b>                 | <b>HIGH</b>              | <b>LOW</b>   | <b>AVERAGE</b>        |                             |           |           |           |           |           |          |          |
| Tensile Str  | Lbs/SqIn                     | 86000                    | 84000        | 85000                 |                             |           |           |           |           |           |          |          |
| RA Per Cent  | Percent                      | 73.8                     | 67.2         | 70.3                  |                             |           |           |           |           |           |          |          |
| Decarb FFD   | Inches                       | .000                     | .000         | .000                  |                             |           |           |           |           |           |          |          |
| Surface def. depth   | Inches                       | .001                     | .001         | .001                  |                             |           |           |           |           |           |          |          |
| <b>Rod / Melt Source</b>   |                              |                          |              |                       |                             |           |           |           |           |           |          |          |
| Rod Source<br>Republic   | Melt Source<br>Republic      | Country of Origin<br>USA | Nafta<br>Yes |                       |                             |           |           |           |           |           |          |          |
| End of Certification   |                              |                          |              |                       |                             |           |           |           |           |           |          |          |

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

*Daniel J. Malik*  
Daniel J. Malik Director of Quality Assurance 31



CERTIFICATE OF TESTS

1807 EAST 28TH ST.  
PHONE: 330-438-3580LORAIN, OH 44055  
FAX: 330-438-5605

REPUBLIC STEEL

6/24/2013  
2:46:00 PM  
PAGE 1 OF 2PURCHASE ORD: 84084  
PART NUMBER: FXT40AA-.375  
ORDER NUMBER: 1547434 - 01  
HEAT: 8193290PURCHASE ORDER DATE: 3/4/2013  
ACCOUNT NUMBER: 5672-1921-01  
SCHEDULE: 4927-93  
REVISION: 1

===== CHARGE ADDRESS ===== SHIP TO =====

JOHNSTOWN WIRE TECHNOLOGIES  
124 LAUREL AVE  
JOHNSTOWN, PA 15906JOHNSTOWN WIRE TECHNOLOGIES  
EDWARD ZAPOLA  
C/O C & BL RAILROAD  
TRACK 629  
JOHNSTOWN, PA 15901----- MATERIAL DESCRIPTION -----  
HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RW-100 REVISION DTD 04/21/04 EXC PARA  
10.3 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RW-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS  
JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL 8 6049A & AMD 1 COND B-1 EXC MARK &  
UT WAIVED EF-AISI-8740-H FINE GRAIN VACUUM DEGASSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY  
RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS  
SIZE: RDS .3750 DIAM X COIL  
RDS 9.5250MM DIAM X COIL----- LADLE CHEMISTRY % -----  

| C     | MN   | P     | S     | SI     | CU    | NI     | CR   |
|-------|------|-------|-------|--------|-------|--------|------|
| 0.40  | 0.77 | 0.010 | 0.010 | 0.24   | 0.10  | 0.52   | 0.58 |
| V     | MO   | SN    | AL    | B      | CB    | N      |      |
| 0.002 | 0.26 | 0.005 | 0.023 | 0.0000 | 0.000 | 0.0060 |      |

  
----- CALCULATED TESTS -----

REDUCTION RATIO 1,177.6 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER ASTM A29.

----- SEMI - FINISHED RESULTS -----

JOMINY HARDNESS TEST SAE J406/ASTM A255  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32  
56 55 55 54 53 52 50 46 43 40 38 36 34 33 32 31 30 30 29 29 29 28 28MACRO ETCH TEST ASTM E381/MIL STD 430  
ETCHANT: HCL TEMPERATURE: 170  
S R C  
AVG 1 1 1MAGNETIC PARTICLE TEST AMS 2301 AMS2304 AMS2300  
IND AVG IND AVG  
FREQ FREQ SEV SEV  
PCE 03 0 0 0 0----- FINISHED SIZE RESULTS -----  
DECARBURIZATION TEST SAE J419/ASTM E1077/JIS G0558  
ETCHANT = NITAL MAGNIFICATION = 100X

|          | SPIKE  | COMPLETE | TOTAL  |
|----------|--------|----------|--------|
|          | INCHES | INCHES   | DEPTH  |
|          |        |          | INCHES |
| PCE 6581 | 0.002  | 0        | 0.002  |

G. KRUTH  
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES



CERTIFICATE OF TESTS

1807 EAST 28TH ST.  
PHONE: 330-438-5580

REPUBLIC STEEL

LORAIN, OH 44055  
FAX: 330-438-5695

6/24/2013  
2:46:00 PM  
PAGE 2 OF 2

PURCHASE ORD: 84084  
PART NUMBER: FXT40AA-.375  
ORDER NUMBER: 1547434 - 01  
HEAT: 8193290

PURCHASE ORDER DATE: 3/4/2013  
ACCOUNT NUMBER: 5672-1921-01  
SCHEDULE: 4927-93  
REVISION: 1

CAPABLE OF SEAM DEPTH 1 $\frac{1}{2}$  MAX DIAMETER NOT LESS THAN .005 MAX

NOTES  
CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, LBL10129, LBL10130, ASTM E1019, LBL10158, LBL10114, AND ASTM E1085, LBL10184, LBL10188.

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN

NOTES (CONTINUED)  
ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

SOURCE INFORMATION  
MELT SOURCE: CANTON CAST ROLL MELT COUNTRY: U.S.A HOT ROLL SOURCE: LORAIN 9/10, U.S.A  
MELT METHOD: EF BLOOM RED. RATIO: 1177.6

END OF DATA CC END OF DATA  
WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA  
FAX SHIP TO 1 COPY ATTENTION EDWARD ZAPOLA 1-814-532-5684  
FILE 1 COPY

G. KRUTH  
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES

COMMERCIAL PLATING COMPANY

TC-4500 XRF ST

Fri Sep 19 03:48:24 1997

COMMERCIAL PLATING CERTIFICATION AND TEST RESULTS

This is to certify that the order described below was plated to comply with the agreed upon requirements of the requested specification.

DATE: 01/18/14

CUSTOMER: MAC FASTENERS

PART NUMBER: AN4-14A

DESCRIPTION: BOLT

ORDER NUMBER: 94031

LOT NUMBER: 68538

TOTAL WEIGHT: 2972 LBS

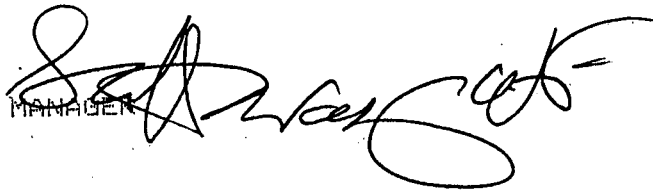
PIECES PLATE TO GAUGE: Y

SPECIFICATION: SAE AMS QQ-P-416C, TYPE II, CLASS 2

REQUIREMENTS: 0.0003 CAD. MIN. AND YELLOW CHROMATE

AUTHORIZED SIGNATURE:

TITLE: QUALITY CONTROL MANAGER





MAC FASTENERS, INC.  
1110 EAST ENTERPRISE  
OTTAWA, KS 66067

## CHEMICAL & PHYSICAL TEST REPORT

|                           |                     |                         |                              |
|---------------------------|---------------------|-------------------------|------------------------------|
| CUSTOMER<br>B/E AEROSPACE | PO NUMBER<br>0PZH84 | MFG QUANTITY<br>110,000 | DATE<br>01/22/14             |
| PART NUMBER<br>AN4-14A    | REV<br>2            | LOT NO<br>68538         | PROCUREMENT SPEC<br>NASM6812 |

|                       |     |       |      |  |     |     |     |                             |      |   |                       |       |    |
|-----------------------|-----|-------|------|--|-----|-----|-----|-----------------------------|------|---|-----------------------|-------|----|
| MATERIAL<br>TYPE 8740 |     |       |      | MATERIAL SPECIFICATION<br>MIL-S-6049/AMS6322 |     |     |     | MILL HEAT NUMBER<br>8193290 |      |   | SUPPLIER<br>JOHNSTOWN |       |    |
| C                     | SI  | Mn    | P    | S  | Cu  | NI  | Cr  | Mo                          | V    | B | Fe                    | Al    | Ti |
| .40                   | .24 | .77   | .010 | .010   | .10 | .52 | .58 | .26                         | .002 |   |                       | .023  |    |
|                       | Co  | N     | BI   | Pb   | Mg  | Zn  |     | Nb                          | Sn   |   |                       | Other |    |
|                       |     | .0060 |      |  |     |     |     |                             | .005 |   |                       |       |    |

### MECHANICAL TEST RESULTS - TESTING PER NASM1312

| ULTIMATE TENSILE STRENGTH<br>POUNDS |       |
|-------------------------------------|-------|
| 5,770                               |       |
| 5,710                               |       |
| 5,720                               |       |
| 5,730                               |       |
| 5,750                               |       |
| MIN. REQ.                           | 4,080 |

| DOUBLE SHEAR STRENGTH<br>POUNDS / PSI |       |
|---------------------------------------|-------|
| 8,180                                 |       |
| 8,130                                 |       |
| 8,140                                 |       |
| 8,160                                 |       |
| 8,190                                 |       |
| MIN. REQ.                             | 7,360 |

SIKORSKY  
3534  
DOR  
MAY 01 2014

| HARDNESS                      |             |
|-------------------------------|-------------|
| ROCKWELL "C" SCALE            |             |
| REQ.                          | 26 - 32 HRC |
| SAMPLE SIZE                   | 5           |
| ACTUAL RESULTS<br>28 - 30 HRC |             |

5/1/14

| METALLURGICAL EXAMINATION                       |                                     |                                    |  |
|---|-------------------------------------|------------------------------------|--|
| Discontinuities                                 | <input checked="" type="checkbox"/> | Carb/Decarb                        | <input checked="" type="checkbox"/>  |
| Grain Flow                                      | <input checked="" type="checkbox"/> | Microstructure                     | <input checked="" type="checkbox"/>  |
| Grain Size                                      | <input checked="" type="checkbox"/> | Appearance                         | <input checked="" type="checkbox"/>  |
| Thread Inspection<br>FED-STD-H28/20 - ASME B1.3 |                                     | System 21 <input type="checkbox"/> | System 22 <input checked="" type="checkbox"/> System 23 <input type="checkbox"/> |

| NDT/ ADDITIONAL TESTS                            |                                     |
|--|-------------------------------------|
| Magnetic Particle Inspection per ASTM E1444      | <input checked="" type="checkbox"/> |
| Liquid Penetrant Inspection per ASTM E1417       | <input type="checkbox"/>            |
| Recess Torque Test                               | <input type="checkbox"/>            |
| Head Marking                                     | <input checked="" type="checkbox"/> |
| Magnetic Permeability<br>ASTM A342 less than 2.0 | <input type="checkbox"/>            |

### TEST CERTIFICATION

WE CERTIFY THAT THE PART NUMBER, LOT NUMBER, AND SAMPLES REFERENCED ABOVE HAVE BEEN TESTED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION FOR THE TESTS REPORTED HEREIN. THIS CERTIFICATION SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE APPROVAL OF MAC FASTENERS, INC.

  
Quality Assurance Representative

AS9100C REGISTERED  
SAI GLOBAL - 0058029

MAC FASTENERS, INC.  
1110 ENTERPRISE  
OTTAWA, KANSAS 66067

## HEAT TREAT CERTIFICATION

CUSTOMER: B/E AEROSPACE

DATE: 01/22/14

PO NUMBER: 0PZH84

MANUFACTURED QUANTITY: 110,000

PROCESSOR:

PAULO PRODUCTS KCMO - NADCAP ID 4679

LOT NUMBER: 68538 ✓

MATERIAL: TYPE 8740

PART NUMBER: AN4-14A ✓

REVISION: 2

REQUIRED HARDNESS: 28 - 32 HRC

SAMPLE SIZE: 5

HARDNESS: 28 - 30 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001 ✓

Notes:

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.

  
QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company - SAI GLOBAL - 0058029

SLIPSTY  
3534  
FOR  
MAY 01 2014

5/1/14  
RECEIVED



**Johnstown  
Wire  
Technologies**

124 Laurel Ave,  
Johnstown, PA 15906

Phone: 814-532-5680  
Fax: 814-532-5684

WORK ORDER  
800310

# TEST REPORT

LOT NUMBER  
K-8193290

SALES ORDER / RLS  
002318 / 1

SOLD TO

Mac Fasteners, Inc.  
C/O TD Logistics Inc.  
14505 W 100th Street  
Lenexa, KS 66215  
USA



|  |                             |                          |              |                       |                             |
|--|-----------------------------|--------------------------|--------------|-----------------------|-----------------------------|
| CUSTOMER P.O.<br>50516   | CUSTOMER PART<br>8740-.2465 | QUANTITY<br>39,644 LBS   | COILS<br>20  | LADING NO<br>00119854 | SHIPMENT DATE<br>09/20/2013 |
| <b>SPECIFICATION</b> MacFast-87246<br><b>AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS TS 95000 PSI Max Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spherodize Annealed In Process Heavy Phos &amp; Light Lube Ctd</b><br><b>Size: .2465 +.0005 -.0005</b> |                             |                          |              |                       |                             |
| <b>CERTIFICATION REQUIREMENTS</b>  |                             |                          |              |                       |                             |
| <b>Chemical</b>  |                             |                          |              |                       |                             |
| C<br>.40   | Mn<br>.77                   | P<br>.010                | S<br>.010    | Si<br>.24             | Al<br>.023                  |
| Cr<br>.58  | Mo<br>.26                   | Cu<br>.10                | V<br>.002    | Ni<br>.52             |                             |
| Ca<br>.000   | Ti<br>???????               | N<br>.0060               | Sn<br>.005   |                       |                             |
| <b>Physical</b>  |                             |                          |              |                       |                             |
| AMS 2301<br>0000   | J1<br>56                    | J10<br>40                | J11<br>38    | J12<br>36             | J2<br>55                    |
|  |                             |                          |              |                       | J3<br>55                    |
|  |                             |                          |              |                       | J5<br>53                    |
|  |                             |                          |              |                       | J4<br>54                    |
|  |                             |                          |              |                       | J6<br>52                    |
|  |                             |                          |              |                       | J7<br>50                    |
|  |                             |                          |              |                       | J8<br>46                    |
|  |                             |                          |              |                       | J9<br>43                    |
| MacroClean E-381<br>111  |                             |                          |              |                       |                             |
| <b>Mechanical</b>  |                             |                          |              |                       |                             |
| <b>TEST</b>  | <b>UNITS</b>                | <b>HIGH</b>              | <b>LOW</b>   | <b>AVERAGE</b>        |                             |
| Tensile Str  | Lbs/Sqin                    | 86000                    | 84000        | 85000                 |                             |
| RA Per Cent  | Percent                     | 73.8                     | 67.2         | 70.3                  |                             |
| Decarb FFD   | Inches                      | .000                     | .000         | .000                  |                             |
| Surface def. depth   | Inches                      | .001                     | .001         | .001                  |                             |
| <b>Rod / Melt Source</b>   |                             |                          |              |                       |                             |
| Rod Source<br>Republic   | Melt Source<br>Republic     | Country of Origin<br>USA | Nafta<br>Yes |                       |                             |
| End of Certification   |                             |                          |              |                       |                             |

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

*Daniel J. Malik*  
Daniel J. Malik, Director of Quality Assurance

SKORSHY  
9534  
MAY 01 2014



## CERTIFICATE OF TESTS

1807 EAST 28TH ST.  
PHOENIX: 330-438-3580LOMAIR, OH 44055  
FAX: 330-438-8695

REPUBLIC STEEL

6/24/2013  
2:46:00 PM  
PAGE 1 OF 2PURCHASE ORD: 84084  
PART NUMBER: FXT40AA-.375  
ORDER NUMBER: 1547434 - 01  
HEAT: 8193290PURCHASE ORDER DATE: 3/4/2013  
ACCOUNT NUMBER: 5672-1921-01  
SCHEDULE: 4927-93  
REVISION: 1

## CHARGE ADDRESS

JOHNSTOWN WIRE TECHNOLOGIES  
124 LAUREL AVE  
JOHNSTOWN, PA 15906

## SHIP TO

JOHNSTOWN WIRE TECHNOLOGIES  
EDWARD ZAPOLA  
C/O C & BL RAILROAD  
TRACK 629  
JOHNSTOWN, PA 15901

## MATERIAL DESCRIPTION

HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RW-100 REVISION DTD 04/21/04 EXC PARA  
10.3 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RW-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS  
JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL 8 6049A & AMD 1 COND B-1 EXC MARK &  
UT WAIVED BY-AISI-8740-H FINE GRAIN VACUUM DEGASSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY  
RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS  
SIZE: RDS .3750 DIAM X COIL  
RDS 9.5250MM DIAM X COIL

## LADLE CHEMISTRY

| C     | MN   | P     | S     | SI     | CU    | NI     | CR   |
|-------|------|-------|-------|--------|-------|--------|------|
| 0.40  | 0.77 | 0.010 | 0.010 | 0.24   | 0.10  | 0.52   | 0.58 |
| V     | MO   | SN    | AL    | B      | CB    | N      |      |
| 0.002 | 0.26 | 0.005 | 0.023 | 0.0000 | 0.000 | 0.0060 |      |

## CALCULATED TESTS

REDUCTION RATIO 1,177.6 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER ASTM A29.

## SEMI - FINISHED RESULTS

JOMINY HARDNESS TEST SAE J406/ASTM A255  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32  
56 55 55 54 53 52 50 46 43 40 38 36 36 34 33 32 31 30 30 29 29 28 28MACRO ETCH TEST ASTM E381/MIL STD 430  
ETCHANT: HCL TEMPERATURE: 170  
AVG S R C  
1 1 1MAGNETIC PARTICLE TEST AMS 2301 AMS2304 AMS2300  
IND AVG IND AVG  
FREQ FREQ SEV SEV  
PCB 03 0 0 0 0FINISHED SIZE RESULTS  
DECARBURIZATION TEST SAE J419/ASTM E1077/JIS G0558  
ETCHANT = NITAL MAGNIFICATION = 100X

|          | SPIKE  | COMPLETE | TOTAL  |
|----------|--------|----------|--------|
|          | INCHES | INCHES   | DEPTH  |
|          |        |          | INCHES |
| PCB 6581 | 0.002  | 0        | 0.002  |

G. KRUTH  
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES

SKORSKY  
3534  
DOR

MAY 01 2004

SLH



CERTIFICATE OF TESTS

1807 EAST 28TH ST.  
PHONE: 330-438-5590

REPUBLIC STEEL

LORAIN, OH 44055  
FAX: 330-438-8695

6/24/2013  
2:46:00 PM  
PAGE 2 OF 2

PURCHASE ORD: 84084  
PART NUMBER: FXT40AA-.375  
ORDER NUMBER: 1547434 - 01  
HEAT: 8193290

PURCHASE ORDER DATE: 3/4/2013  
ACCOUNT NUMBER: 5672-1921-01  
SCHEDULE: 4927-93  
REVISION: 1

CAPABLE OF SEAM DEPTH 1/4 MAX DIAMETER NOT LESS THAN .005 MAX

NOTES  
CHEMICAL ANALYSIS CONFORMS TO APPLICABLE SPECS: ASTM E415, LBL10129, LBL10130, ASTM E1019, LBL10158, LBL10114, AND ASTM E1085, LBL10184, LBL10188.

REPUBLIC STEEL HEREBY CERTIFIES THAT THE MATERIAL LISTED HEREIN HAS BEEN INSPECTED AND TESTED IN

NOTES (CONTINUED)  
ACCORDANCE WITH THE METHODS PRESCRIBED IN THE GOVERNING SPECIFICATIONS AND BASED UPON THE RESULTS OF SUCH INSPECTION AND TESTING HAS BEEN APPROVED FOR CONFORMANCE TO THE SPECIFICATIONS.

CERTIFICATE OF TESTS SHALL NOT BE REPRODUCED EXCEPT IN FULL.

ALL TESTING HAS BEEN PERFORMED USING THE CURRENT REVISION OF THE TESTING SPECIFICATIONS.

RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FED STATUTES TITLE 18 CHAPTER 47.

THE MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL-ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURE DURING PROCESSING OR WHILE IN OUR POSSESSION.

NO WELD OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.

THE RESULTS REPORTED RELATE ONLY TO THE ITEMS TESTED.

SOURCE INFORMATION  
MELT SOURCE: CANTON CAST ROLL MELT COUNTRY: U.S.A HOT ROLL SOURCE: LORAIN 9/10, U.S.A  
MELT METHOD: BP BLOOM RED. RATIO: 1177.6

END OF DATA CC END OF DATA  
WITH SHIPMENT 1 COPY PRINTED AT SHIPPING AREA  
FAX SHIP TO 1 COPY ATTENTION EDWARD ZAPOLA 1-814-532-5684  
FILE 1 COPY

G. KRUTH  
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES

*MT Kruth*

5/1/14  
SIKORSKY  
3534  
DOR  
MAY 01 2014

COMMERCIAL PLATING COMPANY

TC-4500 XRF ST

Fri Sep 19 03:48:24 1997

COMMERCIAL PLATING CERTIFICATION AND TEST RESULTS

This is to certify that the order described below was plated to comply with the agreed upon requirements of the requested specification.

DATE: 01/18/14

CUSTOMER: MAC FASTENERS

PART NUMBER: AN4-14A

DESCRIPTION: BOLT

ORDER NUMBER: 94031

LOT NUMBER: 68538

TOTAL WEIGHT: 2972 LBS

PIECES PLATE TO GAUGE: Y

SPECIFICATION: SAE AMS QQ-P-416C, TYPE II, CLASS 2

REQUIREMENTS: 0.0003 CAD. MIN. AND YELLOW CHROMATE

AUTHORIZED SIGNATURE:

TITLE: QUALITY CONTROL MANAGER



SAUCORNY  
3534  
DOR

MAY 01 2004

5/1/14



# B/E Aerospace, Inc.

Page: 1 of 1

## CONSUMABLES MANAGEMENT

P.O. Box 024263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCRP  
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: P024857**

| LIN# | QUANTITY | U/M | PART-NUMBER | CUST REF# | LOT-NUMBER | MANUFACTURER  | CCODE | MFR DATE | EXP DATE |
|------|----------|-----|-------------|-----------|------------|---------------|-------|----------|----------|
| 2    | 200      | EA  | AN4-15A     |           | 68550      | MAC FASTENERS | 0RPT4 |          |          |

  
Jason Lewis  
Vice President of Quality

07/07/14

**MAC FASTENERS, INC.**  
**1110 ENTERPRISE**  
**OTTAWA, KANSAS 66067**

**CERTIFICATE OF CONFORMANCE  
AND  
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: B/E AEROSPACE

PO: 0RBJ63

PART NUMBER: AN4-15A

REV: 3

LOT NUMBER: 68550

MANUFACTURED QUANTITY: 82,500

MILL HEAT NUMBER: 8195136

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

**MERCURY FREE CERTIFICATION**

MacFasteners certifies that the parts referenced in the above lot number  
do not contain Mercury or Mercury compounds, and were  
manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC FASTENERS within the United States, and were processed in accordance with all applicable drawings and specifications. Objective evidence of compliance is on file, subject to examination upon request.

Mac Fasteners is an AS9100C Registered Company- SAI GLOBAL - 0058029  
Mac Fasteners is a DISC QSLM approved Manufacturer - CAGE Code 0RFT4  
Mac Fasteners is an Airbus approved Supplier - 203399

DATE: 05/23/14

  
QUALITY ASSURANCE REPRESENTATIVE



MAC FASTENERS, INC.  
1110 ENTERPRISE  
OTTAWA, KANSAS 66067

## HEAT TREAT CERTIFICATION

CUSTOMER: B/E AEROSPACE

DATE: 05/23/14

PO NUMBER: 0RBJ63

MANUFACTURED QUANTITY: 82,500

PROCESSOR:

PAULO PRODUCTS KCMO - NADCAP ID 4679

LOT NUMBER: 68550

MATERIAL: TYPE 8740

PART NUMBER: AN4-15A

REVISION: 3

REQUIRED HARDNESS: 26 - 32 HRC

SAMPLE SIZE: 5

HARDNESS: 29 - 30 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001

Notes:

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.



QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company - SAI GLOBAL - 0058029

COMMERCIAL PLATING COMPANY

TC-4500 XRF ET

Wed Jan 14 08:53:36 1998

COMMERCIAL PLATING CERTIFICATION AND TEST RESULTS

This is to certify that the order described below was plated to comply with the agreed upon requirements of the requested specification.

DATE: 05/17/14

CUSTOMER: MAC FASTENERS

PART NUMBER: AN4-15A

DESCRIPTION: DELT

ORDER NUMBER: 99016

LOT NUMBER: C8550

TOTAL WEIGHT: 2297 LBS

PIECES PLATE TO SAUCE: Y

SPECIFICATION: SAE AMS QQ-F-4160, TYPE II, CLASS 2

REQUIREMENTS: 0.0003 CAD. MIN. AND YELLOW CHROMATE

AUTHORIZED SIGNATURE:

TITLE: QUALITY CONTROL MANAGER



**Johnstown  
Wire  
Technologies**

124 Laurel Ave,  
Johnstown, PA 15906

Phone: 814-532-5680  
Fax: 814-532-5684

WORK ORDER  
026652

**TEST REPORT**

LOT NUMBER  
**K-8195136**  
SALES ORDER / RLS  
**005225 / 2**

SOLD TO

Mac Fasteners, Inc.  
C/O TD Logistics Inc.  
14505 W 100th Street  
Lenexa, KS 66215  
USA



|  |                                     |                               |                    |                              |                                    |           |
|--|-------------------------------------|-------------------------------|--------------------|------------------------------|------------------------------------|-----------|
| CUSTOMER P.O.<br><b>50516</b>  | CUSTOMER PART<br><b>8740- .2465</b> | QUANTITY<br><b>17,812 LBS</b> | COILS<br><b>10</b> | LADING NO<br><b>00122992</b> | SHIPMENT DATE<br><b>03/10/2014</b> |           |
| SPECIFICATION <b>MacFast-87246</b><br><b>AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS TS 95000 PSI Max Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spherodize Annealed In Process Heavy Phos &amp; Light Lube Ctd</b><br><b>Size: .2465 +.0005 -.0005</b> |                                     |                               |                    |                              |                                    |           |
| CERTIFICATION REQUIREMENTS   |                                     |                               |                    |                              |                                    |           |
| <b>Chemical</b>  |                                     |                               |                    |                              |                                    |           |
| C<br>.42   | Mn<br>.87                           | P<br>.010                     | S<br>.012          | Si<br>.25                    | Al<br>.027                         | Ni<br>.43 |
| Cr<br>.50  | Mo<br>.21                           | Cu<br>.07                     | V<br>.003          |                              |                                    |           |
| Cb<br>.000   | Ti<br>????????                      | N<br>.0064                    | Sn<br>.004         |                              |                                    |           |
| <b>Physical</b>  |                                     |                               |                    |                              |                                    |           |
| AMS 2301<br>0000   | J1<br>58                            | J10<br>41                     | J11<br>39          | J12<br>38                    | J2<br>58                           | J3<br>57  |
|  |                                     |                               |                    |                              | J5<br>55                           | J4<br>56  |
|  |                                     |                               |                    |                              |                                    | J6<br>53  |
|  |                                     |                               |                    |                              |                                    | J7<br>51  |
|  |                                     |                               |                    |                              |                                    | J8<br>47  |
|  |                                     |                               |                    |                              |                                    | J9<br>44  |
| MacroClean E-381<br>111  |                                     |                               |                    |                              |                                    |           |
| <b>Mechanical</b>  |                                     |                               |                    |                              |                                    |           |
| TEST   | UNITS                               | HIGH                          | LOW                | AVERAGE                      |                                    |           |
| Tensile Str  | Lbs/SqIn                            | 88000                         | 86000              | 87000                        |                                    |           |
| RA Per Cent  | Percent                             | 74.6                          | 70.4               | 72.3                         |                                    |           |
| Decarb FFD   | Inches                              | .000                          | .000               | .000                         |                                    |           |
| Surface def. depth   | Inches                              | .000                          | .000               | .000                         |                                    |           |
| <b>Rod / Melt Source</b>   |                                     |                               |                    |                              |                                    |           |
| Rod Source<br>Republic   | Melt Source<br>Republic             | Country of Origin<br>USA      | Nafta<br>Yes       |                              |                                    |           |
| End of Certification   |                                     |                               |                    |                              |                                    |           |

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

*Daniel J. Matlik*  
Daniel J. Matlik Director of Quality Assurance



## CERTIFICATE OF TESTS

1807 EAST 28TH ST.  
JOHNSTOWN, PA 15136-1580CORRAIR, OH 44055  
FAX: 330-438-8655

REPUBLIC STEEL

1/10/2014  
2:13:00 PM  
PAGE 1 OF 2PURCHASE ORD: 85080  
PART NUMBER: FXT40AA-.375  
ORDER NUMBER: 1564645 - 01  
HEAT: 8195136PURCHASE ORDER DATE: 8/26/2013  
ACCOUNT NUMBER: 5672-1920-01  
SCHEDULE: 2429-94  
REVISION: 1

## CHARGE ADDRESS

JOHNSTOWN WIRE TECHNOLOGIES  
124 LAUREL AVE  
JOHNSTOWN, PA 15906

## SHIP TO

JOHNSTOWN WIRE TECHNOLOGIES  
EDWARD ZAPOLA  
124 LAUREL AVE  
TRUCK STPO 9 ROD DOCK  
JOHNSTOWN, PA 15904

## MATERIAL DESCRIPTION

HOT ROLLED STEEL COILS ALLOY JOHNSTOWN WIRE SPEC RW-100 REVISION DTD 04/21/04 EXC PARA 10.3 AMS  
6322N EXC HARD JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL S 6049A & AMD 1 COMB  
B-1 EXC MARK & UT WAIVED AMS 2301K JOHNSTOWN WIRE SPEC RW-005 REVISION DTD 12/31/00 EXC SURFACE  
DEFECTS EF-AISI-8740-H FINE GRAIN VACUUM DEGASSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY RESTRICTED  
CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS  
SIZE: RDS .3750 DIAM X COIL  
RDS 9.5250MM DIAM X COIL

## LADLE CHEMISTRY %

| C     | MN   | P     | S     | SI     | CU    | NI     | CR   |
|-------|------|-------|-------|--------|-------|--------|------|
| 0.42  | 0.87 | 0.010 | 0.012 | 0.25   | 0.07  | 0.43   | 0.50 |
| V     | MO   | SN    | AL    | B      | CB    | N      |      |
| 0.003 | 0.21 | 0.004 | 0.027 | 0.0000 | 0.000 | 0.0064 |      |

## CALCULATED TESTS

REDUCTION RATIO 1,177.6 TO 1

## SEMI - FINISHED RESULTS

GRAIN SIZE TEST ASTM A29/ASTM E112  
PCE H30301 MCQUAID = 7.00000

## JOMINY HARDNESS TEST

SAE J406/ASTM A255

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
| 58 | 58 | 57 | 56 | 55 | 53 | 51 | 47 | 44 | 41 | 39 | 38 | 36 | 35 | 34 | 34 | 32 | 32 | 30 | 30 | 30 | 29 | 29 | 28 |

## MACRO ETCH TEST

ASTM E381/MIL STD 430

ETCHANT: HCL TEMPERATURE: 170

|     | S | R | C |
|-----|---|---|---|
| AVG | 1 | 1 | 1 |

## MAGNETIC PARTICLE TEST

AMS 2301 AMS2304 AMS2300

|        | IND  | AVG  | IND | AVG |
|--------|------|------|-----|-----|
|        | FREQ | FREQ | SEV | SEV |
| PCE 03 | 0    | 0    | 0   | 0   |

## FINISHED SIZE RESULTS

## DECARBURIZATION TEST

SAE J419/ASTM E1077/JIS G0558

ETCHANT = NITAL

MAGNIFICATION = 100X

|         | SPIKE  | COMPLETE | TOTAL  |
|---------|--------|----------|--------|
|         | INCHES | INCHES   | DEPTH  |
|         |        |          | INCHES |
| PCE 336 | 0.002  | 0        | 0.002  |

G. KRUTH  
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES



# B/E Aerospace, Inc.

Page: 1 of 1

## CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191  
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR  
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


### Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

**FIRM: DART AEROSPACE LTD**

**PURCHASE ORDER#: PO24857**

| LIN# | QUANTITY | U/M | PART-NUMBER  | CUST REF# | LOT-NUMBER | MANUFACTURER | CCODE | MFR DATE | EXP DATE |
|------|----------|-----|--------------|-----------|------------|--------------|-------|----------|----------|
| 7    | 20       | EA  | MS16625-4056 |           | 1583229001 | ROTOR CLIP   | 07382 |          |          |

  
\_\_\_\_\_  
Jason Lewis  
Vice President of Quality

07/07/14



COFC

ROTOR CLIP  
Certified to QS-9000  
Registered to ISO-9002

54133

09/27/2013

B/E AEROSPACE INC  
9835 NW 14TH ST  
MIAMI, FL 33172  
UNITED STATES

879547

1 - 0

Gentlemen:

We hereby certify that your part number MS16625-4056 to our part number HO-56SS MPS ordered on P.O. number 0RWL77 in the quantity of 1,000 pieces has been inspected and that parts and material are in compliance to Rotor Clip blue print specifications. Records of inspection and materials are on file and available for review.

#### DFARS CERTIFICATION NOTICE

Per information provided by our material suppliers, the country of melt for all heats used to produce Rotor Clip stainless steel (Ph 15-7 Mo) and Beryllium Copper ASTM B197 C17200 (Alloy #25) retaining rings complies with DFARS January 2009 Edition, Section 252.225-7014. There will be a \$30 charge if you require an actual certification from our material supplier for any part(s) you have purchased.

Very truly yours,

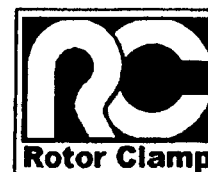
ROTOR CLIP CO., INC.  
Elvis Mercado  
Certification Clerk

Lot(s): 1583229001

ROTOR CLIP COMPANY, INC.  
187 Davidson Avenue, Somerset, NJ 08873  
Phone: (800) 557-6867 \* (732) 469 - 7333 \* Web: rotorclip.com  
Sales Fax: (732) 469-7898 \* Accounting Fax: (732) 805-6467  
Engineering Fax: (732) 805-6469  
Purchasing Fax: (732) 469-6512 \* Quality Assurance Fax: (732) 805-6465



# Rotor Clip and Rotor Clamp Companies, Inc.



## CERTIFICATION OF CONFORMANCE MILITARY SPECIFICATION PRODUCTS

We certify that the product identified below was manufactured using the processes, procedures, working instructions and design documentation required by the Rotor Clip Company Inc Quality Manual. The product has been tested and inspected in accordance with testing procedures outlined in **MIL - R - 21248B**. Neither the product nor the processes contain any mercury compound, mercury contamination or ozone depleting chemicals. The raw material meets the specifications, and the material manufacturer has certified conformance. Inspection and test reports are on file.

MILITARY PART No.: MS16625-4056 REV.D  
ROTOR CLIP PART No.: HO-56SS MPS  
LOT No.: 1583229001  
MATERIAL HEAT No.: 7520332

### MATERIAL

### FINISH

CARBON STEEL: SAE AIR 4127,  
STEEL NUMBER 1066 THRU 1090

PLAIN: ( BERYLLIUM COPPER ONLY )

STAINLESS STEEL: PH15-7Mo IN ACCORDANCE  
WITH SAE AMS 5520 ( UNS S15700 )  
( CONFORMS TO DFARS 252.225-7014 ALTERNATE I )

X

PHOSPHATE:  
( MIL-DTL-16232G, TYPE Z, CLASS 2 )

BERYLLIUM COPPER: ALLOY-170 ( UNS C 17000 )  
OR ALLOY-172 ( UNS C17200 ) IN ACCORDANCE WITH ASTM B194

ZINC PLATE:  
( ASTM B695, TYPE II, CLASS 5 )

### FINAL HARDNESS

HR 30N 63 - 69.5

CADMIUM PLATE:  
( SAE-AMS-QQ-P-416C, TYPE II, CLASS 3 )

COUNTRY OF ORIGIN:

USA X

PASSIVATE:  
( ASTM A 967 - STAINLESS STEEL ONLY )  
EQUIVALENT TO : SAE AMS 2700E

X

CUSTOMER SPECIFIC REQUIREMENT

QA AUTHORIZED SIGNATURE

R. ORTEGA Q/ASPRV.

PRINT NAME & TITLE

7/12/2013

DATE

### DFARS CERTIFICATION NOTICE

Per information provided by our material suppliers, the country of melt for all heats used to produce ROTOR CLIP Stainless Steel ( PH 15-7 Mo ) and Beryllium Copper - ASTM B 197 C17200 ( Alloy # 25 ) - retaining ring complies with DFARS January 2009 Edition, Section 252.225-7014, Preference for Domestic Specialty Metals ( Jun 2005 ) There will be a charge if you require an actual certification from our material supplier for a part (s) you have purchased

ROTOR CLIP COMPANY INC  
187 Davidson Avenue  
Somerset NJ 08873  
1-800-557-6867 Fax 732-805-6465

SOLD TO: B/E AEROSPACE  
PO #: ORWL77  
QTY: 1.000



**AK Steel Corporation**  
**Metallurgical Test Report**  
**Coshocton Works**  
**17400 State Route 16**  
**Coshocton, OH 43812 U.S.A.**

Page 1

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ROTOR CLIP CO., INC.  
187 DAVIDSON AVENUE  
SOMERSET, NJ 08873

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AK STEEL CORPORATION  
STATE ROUTE 16  
RAIL SLIDING/TRUCK DOOR #9  
COSHOCTON, OH 43812

MILL ORDER NO.

273474-0127

PROCESSOR ORDER NO.

133223

BUYERS ORDER NO.

133223

PART NO.

ENGLISH UNITS --PRODUCT-- METRIC UNITS  
.0340 NOM 36.0000 X COIL

| SKID ID     | PIECE           | HEAT    | PARENT LIFT ID | NET WEIGHT           |  |  |
|-------------|-----------------|---------|----------------|----------------------|--|--|
| SKD997779   | I               | 7520332 | 727573-22      | 9,175 LBS. 4,162 KG. |  |  |
| TOTAL SKIDS | TOTAL<br>PIECES |         |                | TOTAL NET WEIGHT     |  |  |
| 1           | 1               |         |                | 9,175 LBS. 4,162 KG. |  |  |

L-Ladle Analysis of Heat

P-Product Analysis of Parent Coil

**CHEMICAL ANALYSIS**

| ID        | C   | MN  | P    | S     | SI  | CR    | NI   | MO   | AL   |  |  |  |  |  |  |  |
|-----------|-----|-----|------|-------|-----|-------|------|------|------|--|--|--|--|--|--|--|
| L 7520332 | .07 | .64 | .030 | .0003 | .35 | 14.62 | 7.31 | 2.14 | 1.19 |  |  |  |  |  |  |  |

REMARKS THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE U.S.A. (DFARS COMPLIANT).  
NO INTENTIONAL ADDITIONS OF MERCURY OR MERCURY COMPOUNDS, RADIUM, ALPHA  
SOURCE, AND LOW MELTING ALLOYS OR ELEMENTS CAPABLE OF FORMING LOW MELTING  
ALLOYS WERE MADE THROUGHOUT THE PROCESSING OF THIS MATERIAL.  
MATERIAL MANUFACTURED WITHOUT THE USE OF OZONE DEPLETING CHEMICALS  
MATERIAL MEETS ALL TECHNICAL REQUIRMENTS OF REFERENCED SPECIFICATIONS

**PRODUCT DESCRIPTION**

CR SHT 15-7 PH MO(R) STAINLESS #2B FINISH COND A SLIT EDGE \* AMS 5520G \* ASTM A 693-06 \* ROTOR CLIP M05 REV E

| PARENT LIFT<br>ID | POS | DIR<br>(L, T, D) | COND    | % ELONG | ELONG<br>METHOD | ELONG<br>GAUGE<br>LENGTH | TENSILE<br>STRENGTH<br>(KSI) | Y.S.<br>.2% OFFSET<br>(KSI) | ROCKWELL<br>HARDNESS<br>Tail | ROCKWELL<br>HARDNESS<br>Front |  |
|-------------------|-----|------------------|---------|---------|-----------------|--------------------------|------------------------------|-----------------------------|------------------------------|-------------------------------|--|
| 727573-22         | T   | T                | CONDA   | 30.1    | MEASURED        | 2 Inch                   | 133.2                        | 58.4                        | BW 91                        | BW 91                         |  |
| 727573-22         | T   | T                | TH 1050 | 6.3     | MEASURED        | 2 Inch                   | 219                          | 209.0                       | C 45                         | C 45                          |  |
| 727573-22         | T   | T                | RH 950  | 6.1     | MEASURED        | 2 Inch                   | 247                          | 214.0                       | C 49                         | C 49                          |  |

\*\*\* CONTINUED ON NEXT PAGE \*\*\*





**AK Steel Corporation**  
**Metallurgical Test Report**  
**Coshocton Works**  
**17400 State Route 16**  
**Coshocton, OH 43812 U.S.A.**

Page 2

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ROTOR CLIP CO., INC.  
187 DAVIDSON AVENUE  
SOMERSET, NJ 08873

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AK STEEL CORPORATION  
STATE ROUTE 16  
RAIL SLIDING/TRUCK DOOR #9  
COSHOCTON, OH 43812

MILL ORDER NO.

273474-0127

PROCESSOR ORDER NO.

133223

BUYERS ORDER NO.

133223

PART NO.

ENGLISH UNITS --PRODUCT-- METRIC UNITS

.0340 NOM 36.0000 X COIL

| PARENT LIFT<br>ID | POS | DIR<br>(L, T, D) | COND    | BEND<br>180<br>1T |                 |                          |                              |                             |                              |                               |  |
|-------------------|-----|------------------|---------|-------------------|-----------------|--------------------------|------------------------------|-----------------------------|------------------------------|-------------------------------|--|
| 727573-22         | T   |                  | CONDA   | PASS              |                 |                          |                              |                             |                              |                               |  |
| PARENT LIFT<br>ID | POS | DIR<br>(L, T, D) | COND    | % ELONG           | ELONG<br>METHOD | ELONG<br>GAUGE<br>LENGTH | TENSILE<br>STRENGTH<br>(KSI) | Y.S.<br>.2% OFFSET<br>(KSI) | ROCKWELL<br>HARDNESS<br>Tail | ROCKWELL<br>HARDNESS<br>Front |  |
| 727573-22         | F   | T                | CONDA   | 35.6              | MEASURED        | 2 Inch                   | 129                          | 58.5                        | BW 91                        | BW 91                         |  |
| 727573-22         | F   | T                | TH 1050 | 6.2               | MEASURED        | 2 Inch                   | 221                          | 209.0                       | C 45                         | C 45                          |  |
| 727573-22         | F   | T                | RH 950  | 6.0               | MEASURED        | 2 Inch                   | 248                          | 219.0                       | C 49                         | C 49                          |  |
| PARENT LIFT<br>ID | POS | DIR<br>(L, T, D) | COND    | BEND<br>180<br>1T |                 |                          |                              |                             |                              |                               |  |
| 727573-22         | F   |                  | CONDA   | PASS              |                 |                          |                              |                             |                              |                               |  |

THE CHEMICAL ANALYSIS AND PHYSICAL OR MECHANICAL TESTS REPORTED ABOVE ARE CORRECT  
AS CONTAINED IN THE RECORDS OF THE CORPORATION.

ALL TESTING IS DONE IN ACCORDANCE WITH A.S.T.M. STANDARDS UNLESS OTHERWISE NOTED

AK Steel Corporation

MWQC#C049 5/99

Program Version LM439B 1.11

THIS CERTIFIED TEST REPORT HAS BEEN DELIVERED TO A CONSIGNEE OF MATERIAL PURCHASED FROM AK  
Steel Corporation. TO AVOID THE POSSIBILITY OF ITS MISUSE ON DELIVERY OF THE REPORT TO A  
THIRD PARTY IT MUST BE RECERTIFIED BY AND UNDER THE NAME OF SUCH CONSIGNEE

SIGNED

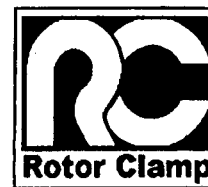
ERIC RAYMONT

APPLICATION ENGINEER

DATE 6/25/2012 TIME 04:37 PM



# Rotor Clip and Rotor Clamp Companies, Inc.



Reference Specification: MIL- R-21248 B  
All Types, Class 1

MILITARY PART No.: MS16625-4056 REV.D  
ROTOR CLIP PART No.: HO-56SS MPS  
LOT No.: 1583229001

New Part ☐ New Supplier ☐ Engineering Change ☐ Approved ☒ Rejected ☐ Conditional Approval ☐

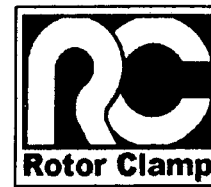
| SPECIFICATION          | INSPECTION RESULTS  | VERIFICATION RESULTS                                      |
|------------------------|---|---|
| FREE DIAMETER          | RING SHALL BE COMPRESSED<br>SO THAT THE OPEN ENDS OF<br>THE RING TOUCH, BUT DO NOT<br>OVERLAP | THE RING SHALL NOT CRACK.<br><br>CHECKED FOR CONFORMANCE. |
| 0.620 + 0.010 /- 0.005 | 5 TIMES FOR EACH RING.<br>RING SHALL NOT EXCEED<br>3.0% OF FREE DIAMETER                      |   |
| 1 0.624                | 0.607   | CONFORMS  |
| 2 0.625                | 0.607   | CONFORMS  |
| 3 0.623                | 0.605   | CONFORMS  |
| 4 0.624                | 0.606   | CONFORMS  |
| 5 0.624                | 0.605   | CONFORMS  |
| 6 0.623                | 0.606   | CONFORMS  |
| 7 0.625                | 0.607   | CONFORMS  |
| 8 0.625                | 0.608   | CONFORMS  |
|                        |   |   |
|                        |   |   |

Prepared by R. ORTEGA Q/ASPRV.

Date: 7/12/2013



# Rotor Clip and Rotor Clamp Companies, Inc.



Reference Specification: MIL- R-21248 B  
All Types, Class 1

MILITARY PART No.: MS16625-4056 REV.D  
ROTOR CLIP PART No.: HO-56SS MPS  
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New Part ☐ New Supplier ☐ Engineering Change ☐ Approved ☒ Rejected ☐ Conditional Approval ☐

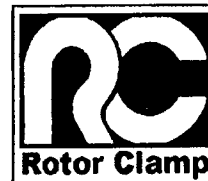
| SPECIFICATION |       | INSPECTION RESULTS | VERIFICATION RESULTS               |
|---------------|-------|--------------------|------------------------------------|
| 9             | 0.625 | 0.606              | DOESNOT CONFORM                    |
| 10            | 0.623 | 0.605              | CONFORMS                           |
| 11            | 0.624 | 0.607              | CONFORMS                           |
| 12            | 0.625 | 0.607              | CONFORMS                           |
| 13            | 0.625 | 0.608              | CONFORMS                           |
| 14            | 0.626 | 0.608              | CONFORMS                           |
| 15            | 0.625 | 0.608              | CONFORMS                           |
| 16            | 0.625 | 0.606              | CONFORMS                           |
| 17            | 0.625 | 0.607              | CONFORMS                           |
| 18            | 0.624 | 0.605              | CONFORMS                           |
| 19            | 0.625 | 0.608              | CONFORMS                           |
| 20            | 0.625 | 0.608              | CONFORMS                           |
|               |       |                    |                                    |
|               |       |                    |                                    |
|               |       |                    |                                    |
|               |       |                    | Parts checked with a microscope no |
|               |       |                    | signs of crack at all.             |
|               |       |                    |                                    |
|               |       |                    |                                    |
|               |       |                    |                                    |
|               |       |                    |                                    |

Prepared by R. ORTEGA Q/ASPRV.

Date: 7/12/2013



# Rotor Clip and Rotor Clamp Companies, Inc.



Reference Specification: MIL- R-21248 B  
All Types, Class 1

MILITARY PART No.: MS16625-4056 REV.D  
ROTOR CLIP PART No.: HO-56SS MPS  
LOT No.: 1583229001

New Part ☐ New Supplier ☐ Engineering Change ☐ Approved ☒ Rejected ☐ Conditional Approval ☐

| SPECIFICATION | INSPECTION RESULTS |      | VERIFICATION RESULTS |
|---------------|--------------------|------|----------------------|
|               | 1                  | 66.0 | CONFORMS             |
|               | 2                  | 66.0 | CONFORMS             |
|               | 3                  | 66.7 | CONFORMS             |
| HARDNESS      | 4                  | 66.8 | CONFORMS             |
|               | 5                  | 66.5 | CONFORMS             |
| Ø HOUSING     | 6                  | 66.1 | CONFORMS             |
| .375 to 1.023 | 7                  | 66.3 | CONFORMS             |
|               | 8                  | 66.2 | CONFORMS             |
| ROCKWELL 30N  | 9                  | 66.3 | CONFORMS             |
| 63 - 69.5     | 10                 | 66.4 | CONFORMS             |
|               | 11                 | 66.3 | CONFORMS             |
|               | 12                 | 65.9 | CONFORMS             |
|               | 13                 | 66.3 | CONFORMS             |
|               | 14                 | 65.9 | CONFORMS             |
|               | 15                 | 66.2 | CONFORMS             |
|               | 16                 | 66.3 | CONFORMS             |
|               | 17                 | 66.4 | CONFORMS             |
|               | 18                 | 66.1 | CONFORMS             |
|               | 19                 | 66.2 | CONFORMS             |
|               | 20                 | 66.0 | CONFORMS             |
|               |                    |      |                      |

Prepared by: R. ORTEGA Q/ASPRV.

Date: 7/12/2013